APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,511	08/31/2000	Kenneth W. Batcher	72255/02659	4471

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EXAMINER
PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	.Applicant(s)
	09/652,511	BATCHER, KENNETH W.
	Examiner	Art Unit	
	Justin M. Philpott	2665	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 June 2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *27-45* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *27-33 and 45* is/are allowed.

6) ☒ Claim(s) *34-44* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 15,

2005 has been entered.

Response to Arguments

2.   Applicant's arguments, see pages 6-7, filed June 15, 2005, with respect to the

newly amended claim 27 have been fully considered and are persuasive. Accordingly,

newly amended claim 27 is allowed, and dependent claims 28-31 and 45 are allowed

based upon their dependency of claim 27.

However, the above-mentioned arguments are not persuasive with respect to the

much more broadly recited independent claims 34 and 40 because the specific argument

(pages 6-7) is directed towards features which are only accurately described in claim 27,

and not in claims 34 or 40. Thus, with respect to claims 34 and 40, in response to

applicant's argument that the references fail to show certain features of applicant's

invention, it is noted that the features upon which applicant relies (i.e., a first device

coupled to a central arbiter, a second device coupled to a priority based arbiter, and the

other limitations argued in pages 6-7 which are only recited in claim 27 and not claims 34

and 40) are not recited in the rejected claim(s). Although the claims are interpreted in

light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus,

applicant's arguments with respect to independent claims 34 and 40 are not persuasive.

Claim Objections

3.   Claim 40 is objected to because of the following informalities: "level

intercepting" (lines 4-5) should be changed to "level; intercepting". Appropriate

correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent granted
> on an application for patent by another filed in the United States before the invention by the applicant
> for patent, except that an international application filed under the treaty defined in section 351(a) shall
> have the effects for purposes of this subsection of an application filed in the United States only if the
> international application designated the United States and was published under Article 21(2) of such
> treaty in the English language.

5.   Claims 34, 38 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by

U.S. Patent No. 6,516,369 to Bredin.

Regarding claim 34, Bredin teaches a system for providing priority based access

to a shared resource, comprising: a first device (e.g., Master_1, see FIG. 2); a second

device (e.g., Master_n); means for alternatively granting access (e.g., via aligner 46, see

FIG. 4) to the shared resource (e.g., channel 22/19 coupled to CPU 10, see FIGS. 1 and 2)

between the first device (e.g., Master_1) and the second device (e.g., Master_n) when

both devices request access (e.g., via request signals R1_Rn) to the shared resource (e.g.,

see col. 3, lines 1-10); and means for intercepting (e.g., via weighted arbitration 44,

reordering the request from highest to lowest priority, see col. 3, lines 42-54) a request

for access (e.g., request signal Rn) from the second device (e.g., Master_n) coupled

between the second device (e.g., Master_n) and the means for alternatively granting

access (e.g., aligner 46); wherein the means for intercepting (e.g., via weighted arbitration

44) the request for access from the second device (e.g., request signal Rn) is responsive to

a signal from the first device (e.g., weighted arbitration 44 is responsive to RR1 which is

generated in part by, and is thus responsive to, request signal R1 [Rq#1], see FIG. 5 and

col. 4, lines 20-58) indicative of a priority status (e.g., see col. 3, lines 35-38 regarding

priority) of the first device (e.g., Master_1) to delay the request from the second device

(e.g., Master_n) to the means for alternatively granting access (e.g., via aligner 46, see

FIG. 4) to the shared resource (e.g., see col. 3, lines 1-10) a predetermined amount of

time (e.g., according to reordering of the request from highest to lowest priority,

inherently comprising a predetermined delay time in accordance with the priority

ordering, see col. 3, lines 42-54) based on the signal indicative of the priority status of the

first device (e.g., request signal R1 [Rq#1] which determines in-part RR1 comprising

priority indication) (e.g., see col. 3, lines 25-58).

Regarding claim 38, Bredin teaches the shared resource is a bus (e.g., bus 19, see

FIG. 1).

Regarding claim 40, Bredin teaches a method for selectively granting access to a

shared resource between a first device and a second device, comprising: receiving a

signal (e.g., request signal R1 [Rq#1], see FIGS. 2, 4 and 5) from the first device (e.g.,

Master_1) requesting access to the shared resource (e.g., channel 22/19 coupled to CPU

10, see FIGS. 1 and 2), the signal (e.g., R1 [Rq#1]) from the first device (e.g., Master_1)

having an associated priority level (e.g., see FIGS. 5 and 6 and col. 4, line 20 – col. 5,

line 23 regarding priority levels according to HWR, MWR and LWR, wherein the level is

determined using Rq#1 via the computation of RR#1); intercepting (e.g., via weighted

arbitration 44, reordering the request from highest to lowest priority, see col. 3, lines 42-

54) a signal (e.g., request signal Rn) from a second device (e.g., Master_n) requesting

access to the shared resource (e.g., channel 22/19 coupled to CPU 10, see FIGS. 1 and 2);

and delaying the intercepted signal from the second device (e.g., Master_n) requesting

access to the shared resource (e.g., channel 22/19 coupled to CPU 10) a predetermined

amount of time based on the associated priority level of the first device (e.g., delaying

according to reordering of the request from highest to lowest priority, inherently

comprising a predetermined delay time in accordance with the priority ordering, see col.

3, lines 42-54).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 39, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bredin in view of applicant's admitted prior art (AAPA).

Regarding claims 39, 43 and 44, Bredin teaches the system discussed above regarding claims 34 and 40. Further, regarding claim 44, Bredin also teaches the associated priority level is one of the group consisting of high priority (e.g., highest/higher priority) low priority (e.g., second or medium priority), and lowest priority (e.g., lower priority) (e.g., see col. 3, lines 25-54 and col. 5, lines 9-23). However, Bredin may not specifically disclose delay based upon an idle state or that the lowest priority is an idle state. AAPA teaches that providing an idle state is well known in the art of priority-based processing (e.g., see specification, page 2, lines 16-18). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to implement an idle state as the lowest priority to avoid delay in generating the modified request signal in the priority-based processing of Bredin since applicant admits that providing an idle state is well known in the art of priority-based processing.

8.   Claims 35-37, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bredin in view of U.S. Patent No. 6,118,787 to Kalkunte et al.

Regarding claim 35, Bredin teaches the system discussed above regarding claim 34, however, may not specifically disclose means for delaying further comprises means for counting. Kalkunte also teaches a system for providing priority based access to a shared resource and, specifically, teaches delay means comprises means for counting (e.g., via counter 164a, see col. 9, lines 6-22). Additionally, the teachings of Kalkunte provide an improvement over a token-based system, such as that of Bredin, by conserving bandwidth and increasing network throughput (e.g., see col. 2, lines 12-48). Thus, at the time of the invention it would have been obvious to one of ordinary skill in

the art to apply the teachings of Kalkunte to the system of Bredin in order to conserve

bandwidth and increase network throughput.

Regarding claim 36, Kalkunte teaches a value is input into the means for counting

(e.g., programmed delay interval t_D is adjusted by a slot time t_s, see Table 1 and col. 8,

lines 3-39) based on a signal indicative of the priority status of a first device (e.g., based

on sensing a deassertion signal); and a predetermined amount of time (e.g., programmed

delay interval) is based on the value of the means for counting (e.g., t_D is based on the

value of the adjusting slot time t_s). As discussed above, the teachings of Kalkunte

provide an improvement over a token-based system, such as that of Bredin, by

conserving bandwidth and increasing network throughput (e.g., see col. 2, lines 12-48).

Thus, at the time of the invention it would have been obvious to one of ordinary skill in

the art to apply the teachings of Kalkunte to the system of Bredin in order to conserve

bandwidth and increase network throughput.

Regarding claim 37, Kalkunte teaches means for delaying (e.g., via MAC 22) is

configured to change the value in the means for counting (e.g., counter 164a) based on a

change of the signal (e.g., upon sensing deassertion of the receive carrier, see col. 8, lines

3-6) from a first device (e.g., station) indicative of the priority status of the first device

(e.g., according to allocated bandwidths indicating the priority of the particular station,

see col. 8, lines 7-38). As discussed above, the teachings of Kalkunte provide an

improvement over a token-based system, such as that of Bredin, by conserving bandwidth

and increasing network throughput (e.g., see col. 2, lines 12-48; and see col. 5, lines 18-

39 regarding priority). Thus, at the time of the invention it would have been obvious to

one of ordinary skill in the art to apply the teachings of Kalkunte to the system of Bredin in order to conserve bandwidth and increase network throughput.

Regarding claim 41, Bredin teaches the system discussed above regarding claim 40, however, may not specifically disclose utilizing a counter. As discussed above, Kalkunte also teaches a system for providing priority based access to a shared resource and, specifically, teaches initializing a counter (e.g., counter 164a) with a predetermined initial value (e.g., programmed delay interval t_D) based on the associated priority level of a first device (e.g., priority level of a particular station, see col. 5, line 18 – col. 6, line 57); and decrementing the counter until the counter reaches a predetermined threshold value (e.g., see col. 8, lines 3-6); wherein the delaying continues until the counter reaches the predetermined threshold value (e.g., see col. 8, lines 3-6 wherein MAC 22 waits for duration of the programmed delay interval). As also discussed above, the teachings of Kalkunte provide an improvement over a token-based system, such as that of Bredin, by conserving bandwidth and increasing network throughput (e.g., see col. 2, lines 12-48). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Kalkunte to the system of Bredin in order to conserve bandwidth and increase network throughput.

Regarding claim 42, Kalkunte teaches re-initializing the counter responsive to a change of the associated priority level of the sign from the first device (e.g., see col. 6, lines 14-57; and see col. 5, lines 18-38 regarding priority). As discussed above, the teachings of Kalkunte provide an improvement over a token-based system, such as that of Bredin, by conserving bandwidth and increasing network throughput (e.g., see col. 2, lines 12-48). Thus, at the time of the invention it would have been obvious to one of

ordinary skill in the art to apply the teachings of Kalkunte to the system of Bredin in

order to conserve bandwidth and increase network throughput.

Allowable Subject Matter

9.   Claims 27-33 and 45 are allowed.

10.   The following is an examiner's statement of reasons for allowance: newly

amended independent claim 27 is allowed for reasons argued by applicant in the Remarks

(pages 6-7) filed June 15, 2005; and claims 28-33 and 45 depend upon claim 27 and are

therefore allowable for the same reasons discussed above regarding claim 27.

Any comments considered necessary by applicant must be submitted no later than

the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on
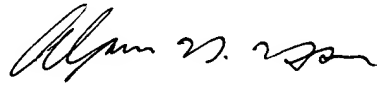
Statement of Reasons for Allowance."

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin M. Philpott whose telephone number is

571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D. Vu can be reached on 571.272.3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

ALPUS H. HSU
PRIMARY EXAMINER